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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,793	12/31/2001	Kenji Sugiyama	0102/0191	5666

21395 7590 07/22/2005

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EXAMINER	
TORRES, JUAN A	

ART UNIT	PAPER NUMBER
2631	

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/029,793	SUGIYAMA, KENJI	
	Examiner	Art Unit	
	Juan A. Torres	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 June 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore,

a) A "**method**" of reproducing a moving picture from an incoming bit stream coded by inter-picture predictive coding including bidirectional prediction, characterized by comprising the steps of: getting information about a frame pixel number of the previously-mentioned incoming bit stream, and setting a decoding picture rate of a moving picture from a relation between the previously-mentioned frame pixel number and a decoding processing capability; causing at least a portion of bidirectional inter-picture prediction pictures in the previously-mentioned incoming bit stream to be not decoded, and performing decoding of the previously-mentioned incoming bit stream at the previously-mentioned set coding picture rate to get decoded pictures; and interpolating a picture of the previously-mentioned gotten decoded pictures to get a reproduced picture at a prescribed picture rate; and

b) A "**method**" of reproducing a moving picture from an incoming bit stream coded by inter-picture predictive coding including bidirectional prediction, characterized by comprising the steps of: getting information about a frame pixel number of the previously-mentioned incoming bit stream, and setting a decoding method not decoding

all bidirectional inter-picture prediction pictures in the previously-mentioned incoming bit stream in cases where decoding of bidirectional inter-picture prediction pictures in the previously-mentioned incoming bit stream can not be done from a relation between the previously-mentioned frame pixel number and a capacity of a frame memory for decoding which will be mentioned later; decoding the incoming bit stream in accordance with the previously-mentioned decoding method to get decoded pictures; and getting a prescribed reproduced picture from the previously-mentioned gotten decoded pictures by a frame memory for decoding which uses a memory corresponding to 4 frames when bidirectional prediction is done as a memory corresponding to two frames double in pixel number in cases where bidirectional prediction is not done in accordance with the previously-mentioned decoding method.

Must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

The intention of this objection is that the Applicant includes a set of flow diagrams indicating the steps of the method claimed.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

In view of the amendment filed on 06/29/2005, the Examiner withdraws specification objections of the previous Office Action.

Response to Arguments

Applicant's arguments filed on 06/29/2005 have been fully considered but they are not persuasive.

Regarding claims 1 and 3:

The Applicant contends, "The first feature of the inventions of claims 1 and 3 is that the decoding picture rate is set in response to the frame pixel number, that is, the frame picture resolution. The second feature of the inventions of claims 1 and 3 is that B pictures are not decoded to implement the decoding at the decoding picture rate, and the B pictures are reproduced by interpolation.

It is respectfully submitted that none of Park (USP 6754274), Mishima (US 6549717), and Kurihara (US 5841475) teaches the first and second features of the inventions of claims 1 and 3.".

The Examiner disagrees and asserts, that, as indicated in the previous Office Action, Park discloses a variable picture rate decoding apparatus for reproducing a moving picture from an incoming bit stream coded by inter-picture predictive coding including bidirectional prediction, characterized by comprising picture rate setting means for getting information about a frame pixel number of the previously-mentioned incoming bit stream, and setting a decoding picture rate of a moving picture from a relation between the frame pixel number and a decoding processing capability (figure 4 block 10 and figure 5 block 201 column 5 lines 4-8); decoding means for causing at least a portion of bidirectional inter-picture prediction pictures in the incoming bit stream to be not decoded, and performing decoding of the incoming bit stream at the coding picture rate to get decoded pictures (figure 4 block 10 and figure 5 blocks 205 and 208 column 5 lines 17-25 and lines 35-39). These features are also in FIG. 5 that as Park discloses "FIG. 5 is a flow chart for explaining the video data decoding method for high-speed reproduction in the FIG. 4 apparatus".

The Applicant contends, "The apparatus of Park (US 6754274) does not decimate or thin some of pictures in response to the decoding capability or the picture resolution. As recognized by the Examiner, the apparatus of Park does not implement interpolation to generate pictures corresponding to discarded ones.".

The Examiner agrees and asserts, that, as indicated in the previous Office Action, Park doesn't disclose the interpolating means for interpolating a picture of the decoded pictures to get a reproduced picture at a prescribed picture rate. Mishima discloses interpolating means for interpolating a picture of the decoded pictures to get a

reproduced picture at a prescribed picture rate (figure 30 column 36 lines 46-54). Park and Mishima are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the interpolation disclosed by Mishima in the decoding apparatus disclosed by Park. The suggestion/motivation for doing so would have been to obtain produce an output picture when the input data cannot be decoded (Mishima abstract).

The Applicant contends, "The Examiner alleges that Park, Fig. 4, block 10 and Fig, 5, block 201, column 5, lines 4-8, discloses setting a decoding picture rate from a relation between the frame pixel number and a decoding processing capability. But a conventional reading of those portions of Park shows that Park merely teaches that information such as a picture size and a picture rate is obtained by analyzing a sequence header. Obtaining information about a picture size and a picture rate is completely different from setting a decoding picture rate from a relation between the frame pixel number and a decoding processing capability, The Examiner states that Park, Fig. 4, block 10, Fig. 5, blocks 205 and 208, column 5, lines 17-25 and 35-39, disclose causing at least a portion of bidirectional inter-picture prediction pictures in the incoming bit stream to be not decoded. It is respectfully submitted that those portions of Park in actuality disclose that B pictures are skipped during the high-speed reproduction and are not skipped during other-speed reproduction. Thus, the portions of Park referenced by the examiner do not teach skipping B pictures in response to the frame pixel number.".

The Examiner disagrees and asserts, that, as indicated in the previous Office Action, the claimed invention indicated getting information and getting is the same that obtaining. Park obtain the picture rate and set a decoding picture rate.

The Applicant contends, "As pointed out by the Examiner, Mishima (column 36, lines 46-54) discloses that in the cases where the whole I picture and the whole P picture can not be read because of time limit, the data of the preceding screen is interpolated to allow output of the playback picture. As recognized by the Examiner, Mishima does not teach setting the decoding picture rate in response to the frame pixel number and suspending the decoding of B pictures in response to the frame pixel number.".

The Examiner agrees and asserts, that, as indicated in the previous Office Action, the rejection is a 103 rejection and Mishima discloses interpolating means for interpolating a picture of the decoded pictures to get a reproduced picture at a prescribed picture rate (figure 30 column 36 lines 46-54). For these reasons and the reasons indicated in the previous Office Action the rejections of claims 1 and 3 are maintained.

Regarding claims 2 and 4:

The Applicant contends, "Kurihara (column 8, lines 44-45) discloses that each of the memories 27 and 28 has a capacity which retains picture element data of a single block line. A single block line is different from one frame. Kurihara (column 9, lines 55-56, column 10, lines 9-11, and column 10, lines 50-52) suggests that each of the frame memories 11 and 12 has a capacity corresponding to one frame. Accordingly, Kurihara

does not teach a frame memory usable as a 4-frame memory. As recognized by the Examiner, Kurihara does not teach setting the decoding picture rate in response to the frame pixel number and suspending the decoding of B pictures in response to the frame pixel number.".

The Examiner disagrees and asserts, that, as indicated in the previous Office Action, Park discloses a variable picture rate decoding apparatus for reproducing a moving picture from an incoming bit stream coded by inter-picture predictive coding including bidirectional prediction, characterized by comprising decoding controlling means for getting information about a frame pixel number of the incoming bit stream, and setting a decoding method not decoding all bidirectional inter-picture prediction pictures in the incoming bit stream in cases where decoding of bidirectional inter-picture prediction pictures in the incoming bit stream can not be done from a relation between the frame pixel number and a capacity of a frame memory for decoding (figure 4 block 10 and figure 5 blocks 205 and 208 column 5 lines 17-25 and lines 35-39); decoding means for decoding the incoming bit stream in accordance with the decoding method to get decoded pictures (figure 4 block 30 and figure 5 blocks 206 column 5 lines 26-27 and lines 40-49). Park doesn't disclose a frame memory for decoding which uses a memory corresponding to 4 frames when bidirectional prediction is done as a memory corresponding to two frames double in pixel number in cases where bidirectional prediction is not done in accordance with the decoding method, and getting a prescribed reproduced picture from the decoded pictures. Kurihara discloses a frame memory for decoding which uses a memory corresponding to 4 frames when bidirectional prediction

is done as a memory corresponding to two frames double in pixel number in cases where bidirectional prediction is not done in accordance with the decoding method, and getting a prescribed reproduced picture from the decoded pictures (figure 5 blocks 11, 12, 27 and 28 column 8 lines 37-60) 4 memory devices. Park and Kurihara are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the memory disclosed by Kurihara in the decoding method disclosed by Park. The suggestion/motivation for doing so would have been to reduce the memory capacity in the case where restored image data of a B-picture are outputted in interlacing (Kurihara abstract). For these reasons and the reasons indicated in the previous Office Action the rejections of claims 2 and 4 are maintained.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In line 19 of claim 7 the recitation "1-picture" is vague and indefinite, it is not clear if it means one-picture (see specification page 13 line 13) or I-picture (see specification page 18 line 23).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US 6754274) and further in view of Mishima (US 6549717).

As per claim 1, Park discloses a variable picture rate decoding apparatus for reproducing a moving picture from an incoming bit stream coded by inter-picture predictive coding including bidirectional prediction, comprising picture rate setting means for getting information about a frame pixel number of the incoming bit stream, and setting a decoding picture rate of a moving picture a which decoding real time is possible from a relation between the frame pixel number and a decoding processing capability (figure 4 block 10 and figure 5 block 201 column 5 lines 4-8); decoding means for causing at least a portion of bidirectional inter-picture prediction pictures in the incoming bit stream to be not decoded, and performing decoding of the incoming bit stream at the decoding picture rate set by the picture rate setting to get decoded pictures (figure 4 block 10 and figure 5 blocks 205 and 208 column 5 lines 17-25 and lines 35-39). Park doesn't disclose the interpolating means for interpolating a picture of the decoded pictures to get a reproduced picture at a prescribed picture rate. Mishima discloses interpolating means for interpolating a picture of the decoded pictures to get a reproduced picture at a prescribed picture rate (figure 30 column 36 lines 46-54). Park and Mishima are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the interpolation disclosed by Mishima in the decoding apparatus

disclosed by Park. The suggestion/motivation for doing so would have been to obtain produce an output picture when the input data cannot be decoded (Mishima abstract). Therefore, it would have been obvious to combine Park and Mishima to obtain the invention as specified in claim 1.

As per claim 3, Park discloses a variable picture rate decoding method of reproducing a moving picture from an incoming bit stream coded by inter-picture predictive coding including bidirectional prediction, comprising the steps of: getting information about a frame pixel number of the incoming bit stream, and setting a decoding picture rate of a moving picture at which decoding in real time is possible from a relation between the frame pixel number and a decoding processing capability (figure 4 block 10 and figure 5 block 201 column 5 lines 4-8); causing at least a portion of bidirectional inter-picture prediction pictures in the incoming bit stream to be not decoded, and performing decoding of the incoming bit stream at the set coding picture rate to get decoded pictures (figure 4 block 10 and figure 5 blocks 205 and 208 column 5 lines 17-25 and lines 35-39). Park doesn't disclose interpolating a picture of the decoded pictures to get a reproduced picture at a prescribed picture rate. Mishima discloses interpolating a picture of the decoded pictures to get a reproduced picture at a prescribed picture rate (figure 30 column 36 lines 46-54). Park and Mishima are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the interpolation disclosed by Mishima in the decoding method disclosed by Park. The suggestion/motivation for doing so would have been to obtain produce an

output picture when the input data cannot be decoded (Mishima abstract). Therefore, it would have been obvious to combine Park and Mishima to obtain the invention as specified in claim 3.

As per claim 5, Park discloses an apparatus for decoding a picture signal at a variable picture rate, comprising means for getting information indicating the number of pixels composing every frame represented by an input signal indicative of a sequence of pictures including bidirectionally predictive coded pictures (figure 4 block 10 and figure 5 block 201 column 5 lines 4-8); means for setting a decoding picture rate in response to a predetermined decoding capability and the number of pixels which is indicated by the information gotten by the first means (figure 4 block 10 and figure 5 block 201 column 5 lines 4-8); means for discarding a part of the input signal which is indicative of at least one among the bidirectionally predictive coded pictures in response to the decoding picture rate set by the second means, and getting a non-discarded part of the input signal (figure 4 block 10 and figure 5 block 208 column 5 lines 17-25 and lines 35-39); means for decoding the non-discarded part of the input signal into a first decoding-resultant signal at a decoding picture rate equal to the decoding picture rate set by the second means (figure 4 block 10 and figure 5 block 205 column 5 lines 17-25 and lines 35-39). Park doesn't disclose means for interpolating a decoding-resultant signal portion corresponding to the discarded part of the input signal in response to the first decoding-resultant signal, and combining the interpolated decoding-resultant signal portion and the first decoding-resultant signal into a second decoding-resultant signal. Mishima discloses means for interpolating a decoding-resultant signal portion

corresponding to the discarded part of the input signal in response to the first decoding-resultant signal, and combining the interpolated decoding-resultant signal portion and the first decoding-resultant signal into a second decoding-resultant signal (figure 30 column 36 lines 46-54). Park and Mishima are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the interpolation disclosed by Mishima in the decoding method disclosed by Park. The suggestion/motivation for doing so would have been to obtain produce an output picture when the input data cannot be decoded (Mishima abstract). Therefore, it would have been obvious to combine Park and Mishima to obtain the invention as specified in claim 5.

Claims 2, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US 6754274) and further in view of Kurihara (US 5841475).

As per claim 2 Park discloses a variable picture rate decoding apparatus for reproducing a moving picture from an incoming bit stream coded by inter-picture predictive coding including bidirectional prediction, comprising decoding controlling means for getting information about a frame pixel number of the incoming bit stream, and setting a decoding method not decoding all bidirectional inter-picture prediction pictures in the incoming bit stream in cases where decoding of bidirectional inter-picture prediction pictures in the incoming bit stream can not be done due to shortage of memory capacity from a relation between the frame pixel number and a capacity of a frame memory for decoding (figure 4 block 10 and figure 5 blocks 205 and 208 column 5 lines 17-25 and lines 35-39); decoding means for decoding the incoming bit stream in

accordance with the decoding method to get decoded pictures (figure 4 block 30 and figure 5 blocks 206 column 5 lines 26-27 and lines 40-49). Park doesn't disclose a frame memory for decoding which uses a memory corresponding to 4 frames when bidirectional prediction is done as a memory corresponding to two frames double in pixel number in cases where bidirectional prediction is not done in accordance with the decoding method, and getting a prescribed reproduced picture from the decoded pictures. Kurihara discloses a frame memory for decoding which uses a memory corresponding to 4 frames when bidirectional prediction is done as a memory corresponding to two frames double in pixel number in cases where bidirectional prediction is not done in accordance with the decoding method, and getting a prescribed reproduced picture from the decoded pictures (figure 5 block 11, 12, 27 and 28 column 8 lines 37-60). Park and Kurihara are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the memory disclosed by Kurihara in the decoding method disclosed by Park. The suggestion/motivation for doing so would have been to reduce the memory capacity in the case where restored image data of a B-picture are outputted in interlacing (Kurihara abstract). Therefore, it would have been obvious to combine Park and Kurihara to obtain the invention as specified in claim 2.

As per claim 4 Park discloses a variable picture rate decoding method of reproducing a moving picture from an incoming bit stream coded by inter-picture predictive coding including bidirectional prediction, comprising the steps of getting information about a frame pixel number of the incoming bit stream, and setting a

decoding method not decoding all bidirectional inter-picture prediction pictures in the incoming bit stream in cases where decoding of bidirectional inter-picture prediction pictures in the incoming bit stream can not be done due to shortage of capacity memory from a relation between the frame pixel number and a capacity of a frame memory for decoding (figure 4 block 10 and figure 5 blocks 205 and 208 column 5 lines 17-25 and lines 35-39); decoding the incoming bit stream in accordance with the decoding method to get decoded pictures (figure 4 block 30 and figure 5 blocks 206 column 5 lines 26-27 and lines 40-49). Park doesn't disclose getting a prescribed reproduced picture from the decoded pictures by a frame memory for decoding using a memory corresponding to 4 frames when bidirectional prediction is done as a memory corresponding to two frames double in pixel number in cases where bidirectional prediction is not done in accordance with the decoding method. Kurihara discloses getting a prescribed reproduced picture from the decoded pictures by a frame memory for decoding using a memory corresponding to 4 frames when bidirectional prediction is done as a memory corresponding to two frames double in pixel number in cases where bidirectional prediction is not done in accordance with the decoding method (figure 5 blocks 11, 12, 27 and 28 column 8 lines 37-60). Park and Kurihara are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the memory disclosed by Kurihara in the decoding method disclosed by Park. The suggestion/motivation for doing so would have been to reduce the memory capacity in the case where restored image data of a B-picture are outputted in interlacing (Kurihara abstract). Therefore, it would

have been obvious to combine Park and Kurihara to obtain the invention as specified in claim 4.

As per claim 6, Park discloses an apparatus for decoding a picture signal at a variable picture rate, comprising first means for getting information indicating the number of pixels composing every frame represented by an input signal indicative of a sequence of pictures including bidirectionally predictive coded pictures (figure 4 block 10 and figure 5 block 201 column 5 lines 4-8); a frame memory having a preset capacity (figure 4 block 50 column 4 lines 20-34); second means for deciding whether or not first portions of the input signal which represent the bidirectionally predictive coded pictures respectively can be decoded on the basis of the preset capacity of the frame memory and the pixel number indicated by the information gotten by the first means (figure 4 block 10 and figure 5 blocks 205 and 208 column 5 lines 17-25 and lines 35-39); third means for, in cases where the second means decides that the first portions of the input signal which represent the bidirectionally predictive coded pictures respectively can be decoded, decoding a whole of the input signal while using the frame memory as a memory having a capacity corresponding to four frames each composed of a first number of pixels (figure 4 block 30 and figure 5 block 206 column 5 lines 17-25 and lines 35-39); and fourth means for, in cases where the second means decides that the first portions of the input signal which represent the bidirectionally predictive coded pictures respectively can not be decoded, decoding only second portions of the input signal which differ from the first portions thereof (figure 4 block 30 and figure 5 block 208 column 5 lines 17-25 and lines 35-39). Park doesn't disclose that the frame

memory as a memory having a capacity corresponding to two frames each composed of a second number of pixels, the second number being equal to twice the first number. Kurihara discloses the frame memory as a memory having a capacity corresponding to two frames each composed of a second number of pixels, the second number being equal to twice the first number (figure 5 blocks 11 and 12 column 8 lines 37-60). Park and Kurihara are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the memory disclosed by Kurihara in the decoding method disclosed by Park. The suggestion/motivation for doing so would have been to reduce the memory capacity in the case where restored image data of a B-picture are outputted in interlacing (Kurihara abstract). Therefore, it would have been obvious to combine Park and Kurihara to obtain the invention as specified in claim 6.

As per claim 7, Park discloses an apparatus for decoding a picture signal at a

an apparatus for decoding an input signal representing a sequence of pictures each composed of pixels, the number of which is changeable, the pictures including unidirectionally predictive coded pictures and bidirectionally predictive coded pictures, the apparatus comprising first means for deciding whether or not the number of pixels composing every picture represented by the input signal exceeds a prescribed reference value (figure 4 block 10 and figure 5 blocks 205 and 208 column 5 lines 17-25 and lines 35-39); second means for, in cases where the first means decides that the number of pixels does not exceed the prescribed reference value, decoding a whole of the input signal into a first decoding-resultant signal in response to forward prediction

reference pictures and backward prediction reference pictures (figure 4 block 30 and figure 5 block 206 column 5 lines 17-25 and lines 35-39); third means for, in cases where the first means decides that the number of pixels exceeds the prescribed reference value, decoding only portions of the input signal which represent pictures except the bidirectionally predictive coded pictures into a second decoding-resultant signal in response to unidirectional prediction reference pictures (figure 4 block 30 and figure 5 block 208 column 5 lines 17-25 and lines 35-39). Park doesn't disclose a first frame memory having first and second areas; and a second frame memory having first and second areas; wherein the first area of the first frame memory is operative for, in cases where the first means decides that the number of pixels does not exceed the prescribed reference value, storing a I-picture corresponding portion of the first decoding-resultant signal, wherein the second area of the first frame memory is operative for, in cases where the first means decides that the number of pixels does not exceed the prescribed reference value, storing a portion of the first decoding-resultant signal which represents a bidirectionally predictive coded picture and outputting said stored portion of the first decoding-resultant signal, wherein the first area of the second frame memory is operative for, in cases where the first means decides that the number of pixels does not exceed the prescribed reference value, storing a portion of the first decoding-resultant signal which represents one of the forward prediction reference pictures and outputting said stored portion of the first decoding-resultant signal, and wherein the second area of the second frame memory is operative for, in cases where the first means decides that the number of pixels does not exceed the prescribed

reference value, storing a portion of the first decoding-resultant signal which represents one of the backward prediction reference pictures and outputting said stored portion of the first decoding-resultant signal; and wherein the first and second areas of the first frame memory are operative for, in cases where the first means decides that the number of pixels exceeds the prescribed reference value, storing a I-picture corresponding portion of the second decoding-resultant signal, and wherein the first and second areas of the second frame memory are operative for, in cases where the first means decides that the number of pixels exceeds the prescribed reference value, storing a portion of the second decoding-resultant signal which represents one of the unidirectional prediction reference pictures and outputting said stored portion of the second decoding-resultant signal. Kurihara discloses a first frame memory having first and second areas (figure 5 blocks 11, 27 and 28 column 8 lines 37-60); and a second frame memory having first and second areas (figure 5 blocks 12, 27 and 28 column 8 lines 21-60); wherein the first area of the first frame memory is operative for, in cases where the first means decides that the number of pixels does not exceed the prescribed reference value, storing a I-picture corresponding portion of the first decoding-resultant signal, wherein the second area of the first frame memory is operative for, in cases where the first means decides that the number of pixels does not exceed the prescribed reference value, storing a portion of the first decoding-resultant signal which represents a bidirectionally predictive coded picture and outputting said stored portion of the first decoding-resultant signal, wherein the first area of the second frame memory is operative for, in cases where the first means decides that the number of pixels does not

exceed the prescribed reference value, storing a portion of the first decoding-resultant signal which represents one of the forward prediction reference pictures and outputting said stored portion of the first decoding-resultant signal, and wherein the second area of the second frame memory is operative for, in cases where the first means decides that the number of pixels does not exceed the prescribed reference value, storing a portion of the first decoding-resultant signal which represents one of the backward prediction reference pictures and outputting said stored portion of the first decoding-resultant signal (figure 5 blocks 12, 27 and 28 column 8 lines 21-60; column 9 lines 16-24; column 11 lines 4-21; column 11 lines 39-53; column 11 line 64 to column 12 line 14; column 12 lines 25-32; column 12 lines 43-55); and wherein the first and second areas of the first frame memory are operative for, in cases where the first means decides that the number of pixels exceeds the prescribed reference value, storing a I-picture corresponding portion of the second decoding-resultant signal, and wherein the first and second areas of the second frame memory are operative for, in cases where the first means decides that the number of pixels exceeds the prescribed reference value, storing a portion of the second decoding-resultant signal which represents one of the unidirectional prediction reference pictures and outputting said stored portion of the second decoding-resultant signal (figure 5 blocks 12, 27 and 28 column 8 lines 21-60; column 9 lines 16-24; column 11 lines 4-21; column 11 lines 39-53; column 11 line 64 to column 12 line 14; column 12 lines 25-32; column 12 lines 43-55). Park and Kurihara are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to

incorporate the memory disclosed by Kurihara in the decoding method disclosed by Park. The suggestion/motivation for doing so would have been to reduce the memory capacity in the case where restored image data of a B-picture are outputted in interlacing (Kurihara abstract). Therefore, it would have been obvious to combine Park and Kurihara to obtain the invention as specified in claim 7.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is (571) 272-3119. The examiner can normally be reached on Monday-Friday 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Juan Alberto Torres
07-12-2005

KEVIN BURD
PRIMARY EXAMINER